

Comparisons of Job Characteristics

Focus Occupation: [Civil Engineering Technicians \(17-3022\)](#)

Associated Occupation: [Surveying and Mapping Technicians \(17-3031\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 77

Focus Occupation: Civil Engineering Technicians (17-3022)
Associated Occupation: Surveying and Mapping Technicians (17-3031)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Mathematics	9.2	15.0	15.0	0	Current knowledge level may be sufficient
Geography	3.9	14.5	9.0	<<	Extensive education and/or training may be required
Computers and Electronics	8.4	13.4	10.8	<	Expanded education and/or training may be required
Design	5.2	11.8	14.1	>	Current knowledge level is likely sufficient
Engineering and Technology	5.7	10.3	15.6	>>	Current knowledge level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 85

Focus Occupation: Civil Engineering Technicians (17-3022)
Associated Occupation: Surveying and Mapping Technicians (17-3031)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Mathematics	6.2	11.6	8.7	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 93

Focus Occupation: Civil Engineering Technicians (17-3022)
Associated Occupation: Surveying and Mapping Technicians (17-3031)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Near Vision	11.1	13.2	12.6	0	Current ability level may be sufficient
Information Ordering	9.9	11.5	10.3	<	Some improvement in abilities may be required
Mathematical Reasoning	6.3	11.2	10.3	0	Current ability level may be sufficient
Finger Dexterity	7.6	10.2	7.2	<<	Extensive improvement in abilities may be required
Far Vision	7.8	10.0	9.0	<	Some improvement in abilities may be required
Flexibility of Closure	7.8	9.8	7.4	<<	Extensive improvement in abilities may be required
Number Facility	6.3	9.2	9.2	0	Current ability level may be sufficient
Visual Color Discrimination	6.4	8.6	6.7	<	Some improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 89

Focus Occupation: Civil Engineering Technicians (17-3022)
Associated Occupation: Surveying and Mapping Technicians (17-3031)

Work Activities	Exclusivity of Activity
Analyze technical data, designs, or preliminary specifications	47
Communicate technical information	4
Conduct land surveys	81
Conduct plant location surveys	87
Draw maps or charts	69
Draw prototypes, plans, or maps to scale	57
Interpret aerial photographs	69
Operate land or site surveying instruments	80
Prepare safety reports	60
Read maps	42
Read technical drawings	7
Use computer aided drafting or design software for design, drafting, modeling, or other engineering tasks	58
Use drafting or mechanical drawing techniques	50

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 75

Focus Occupation: Civil Engineering Technicians (17-3022)
Associated Occupation: Surveying and Mapping Technicians (17-3031)

Tools and Technologies	Exclusivity
Audio and visual equipment	4
Computer data input devices	2
Computer printers	2
Computers	1
Content authoring and editing software	1
Cutting and crimping and punching tools	3
Forming tools	2
Garden tools	12
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Land surveying instruments	19
Length and thickness and distance measuring instruments	2
Measuring and layout tools	3
Mechanical instruments	14
Meteorological instruments	16
Network applications software	1
Personal communication devices	2

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.